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PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)

Greene-P1-03

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on July 12, 2007

Signature

Typed or printed name Peter K. Trzyna

Application Number

10/722,648

Filed

Nov. 25, 2003

First Named Inventor

REES, Frank L.

Art Unit

3662

Examiner

LOBO, Ian J.

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐

applicant/inventor.

☐

assignee of record of the entire interest.

See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒

attorney or agent of record. 312,601

Registration number 32,601

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attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____

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Telephone number

July 12, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.
Submit multiple forms if more than one signature is required, see below*.

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*Total of _____ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

1. **Clear errors or omissions as to claims 1, 61, 64-65: Failure to consider filed evidence of unobviousness.**

Applicant's April 26, 2007, filing at page 2, states: "Definitional rebuttal evidence is enclosed herewith." The Office Action reply did not consider the plain and ordinary meaning of the terms, to which the PTO can take Notice. The failure to consider this evidence of non-obviousness is clear error.

2. **Clear errors or omissions as to claims 1, 61, 64-65: All claim elements have not been shown in the cited art.**

The cited art does not disclose the claimed receiving the secondary wavelet produced by the nonlinear effect; and processing the received secondary wavelet in identifying the object.

The Office Action dated February 27, 2007, states: "applicant argues that the Sen et al. patent does not disclose or show the claimed "secondary wavelet... This is not agreed with. Sen et al. discloses "backscattering..."

However, backscattering does not disclose a secondary wavelet, e.g, in Sen. As per the above-mentioned definitions, "backscattering" refers to: "the deflection of radiation or particles by scattering through angles greater than 90 (degrees) with reference to the original direction of travel," and with regard to acoustics, "wavelets" refers to:

mathematical functions that cut up data into different frequency components, and then study each component with a resolution matched to its scale. They have advantages over traditional Fourier methods in analyzing physical situations where the signal contains discontinuities *and sharp spikes*, as well as being compactly constrained in time duration.

From the plain and ordinary meaning of the terms, the Examiner's contended "backscattering" **has no bearing whatsoever** on the claimed secondary wavelet... etc.

The attention of the Review Panel is respectfully drawn to Applicant's filing of April 26, 2007, Para. 1, pages 2-4. The applied references fail to disclose all expressly claimed elements or limitations, and thus the rejection is clearly erroneous. *In re Fine*, 873 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

3. Clear errors or omissions as to claims 1, 61, 64-65: Improper reason to combine or modify: inoperability of references.

Applicant's filing of November 26, 2006, notes that the Examiner's contended combination of teachings would render the cited art inoperable for their respective purposes. In the Office Action dated February 27, 2007, the Examiner states: "This is also not convincing since the mere substitution of one non-linear acoustic source (Rees) for another (Sen et al.) would not render inoperable the system of Sen et al.

However, Rees is an optical detection system and Sen et al. is not. Rees uses a laser to detect sound generated by weather: as regards detection, the acoustic source in Rees is inclement weather (Col. 1, line 39, etc.). Sen et al. uses an acoustic pulse emitter and corresponding sensors.

The non-overlapping PTO classes of Rees and Sen et al. evidence that these patents involve different technologies, and the Examiner has not explained how one could meld a laser to optically detecting weather (Rees) into a system using sound (from an acoustic pulse emitter Sen et al.) to detect land mines underground.

The Examiner has pointed to Col. 15, line 58 - Col. 16, line 4 in Rees:

using a non-linearly generated and radial range focused acoustic sawtooth wave to create an acousto-optic mirror (AOM) acting as a retroreflector. Sufficient acoustic enhancement to create a shock front to a nonlinear acoustic sawtooth wave is brought about by transmitting a synthetic spectrum waveform using a multiple set of phase locked, pulsed acoustic carrier waveforms each emitted from individual projectors in a large array of loudspeakers. Constructive interference occurs when these acoustic pulses come together to add coherently... the each of these discontinuities act as an optical mirror.

This section of Rees establishes that Rees is still a system for optical detection of inclement weather that can involve "transmitting a synthetic spectrum waveform using a multiple set of phase locked, pulsed acoustic carrier waveforms each emitted from individual projectors in a large array of loudspeakers" to obtain "constructive interference" that acts "as an optical mirror."

The Examiner contends that "the mere substitution of one non-linear source (Rees) for another (Sen et al.) would not render inoperable the system of Sen et al. However, an acousto-optic mirror (Rees) would not function in the granular bed of Sen -e.g., for detecting land mines. That is, Rees's

optical mirror is to redirect a laser beam, which of course could not possibly function in the ground in Sen.

The Review Panel is respectfully directed to Applicant's filing of April 26, 2007, Para. 2, pages 4-6. A rejection premised on an improper reason to combine (contended combination of teachings rendered inoperable) is clear error. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

4. Clear errors or omissions as to claims 1, 61, 64-65: Improper reason to combine or modify: change principles of operation.

In the Office Action dated February 27, 2007, the Examiner states: "such a substitution would not change the "principles of operation" of the Sen et al. system.

But again, light and sound systems have different principles of operation. More particularly, Rees teaches, in the Abstract:

Method and apparatus for detecting conditions in the atmosphere which are hazardous to flying aircraft and providing early warning to pilots or ground personnel. The method includes using a laser beam and a coherent optical receiver to optically sense sound waves produced by those hazardous conditions and measuring the effect of those sound waves on the transmitted and received optical beams.

Sen et al. teaches, in Fig. 9, "a detection system according to the present invention" (Col. 6, line 26) which shows a platform whereby an acoustic pulse generator 34 points downward and "sensor 33 has a tip that contacts the soil." Col. 6, line 36.

The Examiner's proposed attempt to combine teachings would change the principles of operation: As stated above, Rees is premised on the optical detection of the sound produced by weather (See Rees, as more precisely set out in Col. 1, line 39 etc., in view of the abstract) while Sen et al. uses a platform whereby an acoustic pulse generator 34 points downward so that "sensor 33 has a tip that contacts the soil." (See, e.g., Col. 6, line 36). Thus, the transmitters, detectors, and other equipment of the respective patents operate by different principles of operation. For example, the beam splitters, an optical line array, telescope, etc. of Rees operate by different principles of operation than, e.g., Fig. 9, of Sen et al. For further example, receiving the "acoustic impulse" of Sen et al. in the "telescope" of Rees would not function without substantially changing principles of operation. Sen et

al.'s detectors are unsuitable for optical detection (presumably, under the Examiner's theory, from the ground of Sen et al.).

Part of the reason that the proposed substitution is completely implausible is because the respective purposes are not the easiest to harmonize e.g., because one cannot pass a laser beam (Rees) underground (Sen) for the purpose of detecting "conditions in the atmosphere which are hazardous to flying aircraft" (Rees). Nor are weather conditions (Rees) to be found in the "granular bed" of Sen et al. Nor do non-metal land mines of Sen et al. fly in inclement weather (Rees) or require a ground crew. Nor does an acousto-optic mirror function in the granular bed of Sen et al. for detecting land mines. Contradiction between the respective references is pervasive, so of course their operating principles are incompatible and completely implausible.

The Review Panel is respectfully directed to Applicant's filing of April 26, 2007, Para. 3, pages 6-8. A rejection premised on an improper reason to combine (change in the principles of operation of the devices in the contended combination of teachings) is clear error. *In re Clinton*, 527 F.2d 1266, 188 USPQ 365 (CCPA 1976)

5. Clear errors or omissions as to claims 1, 61, 64-65: No proper motivation or suggestion to combine or modify; references teach away.

In the Office Action dated February 27, 2007, the Examiner states: "the increased acoustic enhancement, as suggested by Rees, is motivation.

The Examiner has omitted that the reason for this feature in Rees is "to create an acousto-optic mirror" (Col. 15, line 60). An acousto-optic mirror does not function in the granular bed of Sen et al. for detecting land mines. Thus, the Examiner has provided no plausible reason to combine these diverse patents, and indeed the references teach away from the proposed combination.

The Review Panel is respectfully directed to Applicant's filing of April 26, 2007, Para. 4, pages 8-9. A rejection premised on no proper reason to combine is clear error, and a rejection premised on references that teach away from the combination is clear error. *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002) and *In re Fine*, respectively.

6. Clear errors or omissions as to claims 1, 61, 64-65: Failure to provide response sufficient under 35 U.S.C. Sec. 132.

35 U.S.C. Sec. 132 requires that the PTO provide "the reasons for such rejection... together with such information as may be useful in judging the propriety of continuing prosecution...." The Examiner failed to provide the requested information.

The Review Panel is respectfully directed to Applicant's filing of April 26, 2007, pages 3, 4, 5, 7, and 8. A rejection non-compliant with Sec. 132 is clear error.

7. Clear errors or omissions as to claims 1, 61, 64-65: Failure to provide declaration.

The cited art does not mention the claimed secondary wavelet, etc. and thus the rejection is premised on the Examiner's contention that backscattering in Sen discloses the claimed secondary wavelet. This is a contention of fact contradicted by Sen, the filed definitions, and Applicant, and thus the Examiner's declaration or affidavit to establish his contention has been required. The failure to provide the declaration under this circumstance is clear error, as it is elsewhere where Applicant has required.

The Review Panel is respectfully directed to Applicant's filing of April 26, 2007, pages 3, 4, 6, and 8. See C.F.R. Sec. 1.104(d)(2).

APPLICANT CLAIMS SMALL ENTITY STATUS. The Commissioner is hereby authorized to charge any fees associated with the above-identified patent application or credit any overcharges to Deposit Account No. 50-0235.

Please direct all correspondence to the undersigned at the address given below.

Respectfully submitted,



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Date: July 12, 2007

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